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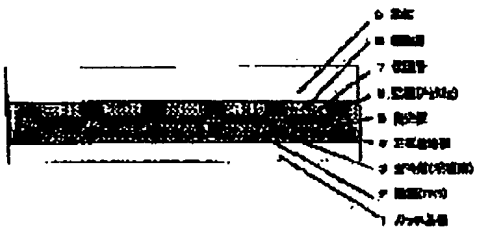
(54) ORGANIC LIGHT-EMITTING ELEMENT, AND MANUFACTURE THEREOF

(57)Abstract:
PROBLEM TO BE SOLVED: To provide an organic light-emitting element of high reliability.
SOLUTION: A glass substrate 1, a transparent electrode 2 for injecting holes on the surface of it, an insulation layer (support layer) 3 of silicon oxide or the like to surround plural micro-ranges, an organic hole transport layer 4, an organic light-emitting layer 5, a metal electrode layer 6 comprising silver-magnesium alloy for injecting electrons, and a silicon oxide layer 7 as a protective layer are sequentially formed, and another substrate 9 is disposed on the surface of this substrate via a thin resin layer 8. Since electric field is applied between a positive electrode and a negative electrode to emit light from the light-emitting layer 5, each microscopic light-emitting parts are separated from each other by the substrate and resin, so that the infiltration of moisture or the like in outer air is made difficult, thereby black points are less likely to be enlarged to achieve high reliability.



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CLAIMS

[Claim(s)]

[Claim 1] At least one side is formed between two transparent substrates. At least on one substrate An anode plate layer, In the organic light emitting device which the luminous layer which becomes with an organic substance, and two or more layers which come to contain catholyte are formed, and luminescence produces from the luminous layer of the fixed pixel section by impregnation of a current The organic light emitting device characterized by forming current the non-pouring in field which has a detailed configuration further inside a pixel on the substrate with which said luminous layer was formed, and carrying out adhesion junction through another protective group plate and resin layer.

[Claim 2] The current non-pouring in field section is an organic light emitting device

according to claim 1 characterized by forming the supporters who have the structure projected on the substrate, and another protective group plate touching these supporters through a direct or resin layer.
[Claim 3] The organic light emitting device according to claim 2 characterized by forming supporters in the substrate with which the luminous layer is formed.
[Claim 4] The organic light emitting device according to claim 2 characterized by forming supporters in the substrate with which a luminous layer is not formed.
[Claim 5] The organic light emitting device according to claim 2 to which supporters are characterized by being the thickness more than the thickness of an organic layer.
[Claim 6] The organic light emitting device according to claim 1 characterized by being the structure where current a non-pouring in field surrounds a minute current impregnation field.
[Claim 7] The organic light emitting device according to claim 6 to which the dimension of a minute field is characterized by being 100 microns or less.
[Claim 8] The organic light emitting device according to claim 1 to which a substrate is characterized by being a flexible substrate.
[Claim 9] The manufacture approach of the organic light emitting device characterized by consisting of a process which said 1st substrate is made to carry out opposite arrangement of the 2nd substrate further with the process which forms the insulating layer of a minute configuration in a part of front face of the electrode formed on the 1st substrate, and forms another electrode in the organic thin film list which contains a luminous layer further, and is filled up with resin between two substrates.
[Claim 10] The process which forms the electrode of the flat-surface configuration where it left the fixed current non-pouring in field, on the 1st substrate, and forms another electrode in the organic thin film which contains a luminous layer further, and a list, The manufacture approach of the organic light emitting device characterized by consisting of a process which is made to carry out opposite arrangement of the process, the 1st substrate, and the 2nd substrate which form supporters in the 2nd substrate at the part corresponding to said current non-pouring in field, and is filled up with resin between substrates.
[Claim 11] The manufacture approach of the organic light emitting device according to claim 9 or 10 characterized by the process with which resin is a liquid and fills up resin between substrates being a process using capillarity.
[Claim 12] The manufacture approach of an organic light emitting device according to claim 11 that it is ultraviolet-rays hardening resin, and it is characterized by making it harden after resin is filled up with resin between substrates.
[Claim 13] The manufacture approach of the organic light emitting device according to claim 9 or 10 characterized by the process with which resin is a powder-like solid-state and fills up resin between substrates using a thermofusion process.

[Translation done.]